PETER WILLIAM GREENWOOD.

Improvement in Spinning-Mules, &c.

No. 114,288. Patented May 2, 1871.

Fig. 1.

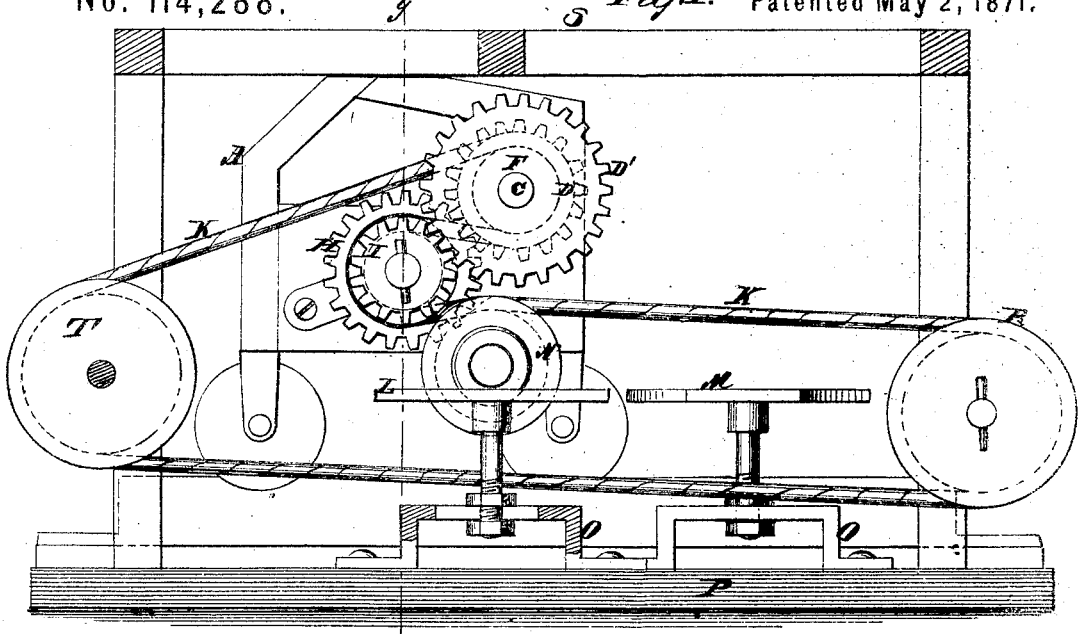


Fig. 2

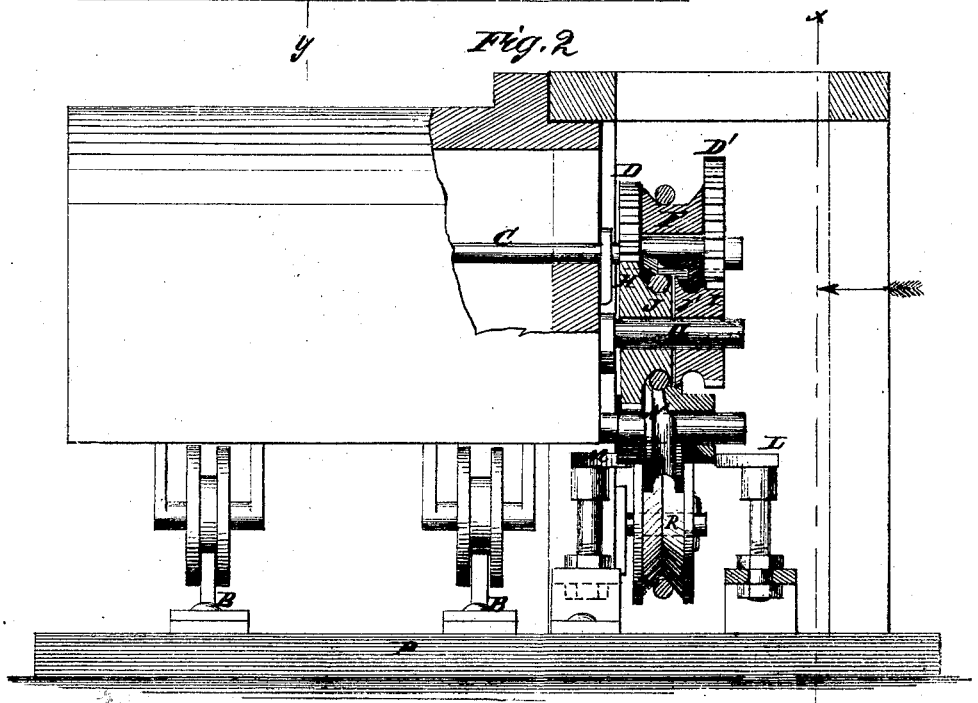
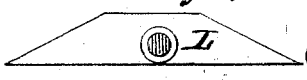


Fig. 3.



Witnesses:

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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

United States Patent Office.

PETER WILLIAM GREENWOOD, OF LANDENBURG, NEAR AVONDALE, PENNSYLVANIA.

Letters Patent No. 114,288, dated May 2, 1871.

IMPROVEMENT IN SPINNING-MULES, &c.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, PETER WILLIAM GREENWOOD, of Landenburg, near Avondale, in the county of Chester and State of Pennsylvania, have invented a new and useful Improvement in Spinning-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to a new and useful improvement in spinning-machines, whereby a better quality of thread is produced than can be by the ordinary spinning-machine; and

It consists in a combination of certain instrumentalities, which will be first fully described and then clearly pointed out in the claim.

In the accompanying drawing—

Figure 1 represents an end view of a spinning-frame provided with the necessary mechanism to produce the change in the speed of the spindles, the view being a vertical section looking from the line *x x* of fig. 2 in the direction indicated by the arrow.

Figure 2 is a vertical cross-section of fig. 1 taken on the line *y y*.

Figure 3 is a top view of one of the double inclined planes detached.

Similar letters of reference indicate corresponding parts.

A is the carriage of a spinning-machine, running on ways B B in the usual manner.

C represents the cylinder-shaft.

D D′ are gear-wheels fast on the end of the cylinder-shaft.

F is a band or belt-pulley between the two wheels D D′.

G is a stud supported by a bracket on the end of the carriage.

On this stud G are two gear-wheels, H and I, with a band-pulley connected with each.

J J′ are the band-pulleys.

These pulleys and the wheels with which they are severally connected are loose on the stud, and are revolved independently of each other by the band K, which is shifted from one pulley to the other by means of inclined planes L and M and the shifting-pulley N.

The inclined planes are adjustably attached to the stands O O on the floor P, and may be moved back and forth in slots in the stands for shifting the band at an earlier or later stage of the movement of the carriage, as may be desired.

The shifting-pulley N revolves on a stud fixed in the end of the carriage, on which stud the pulley has a lateral motion for carrying the band from one to the other of the pulleys J J′.

R is a band-pulley which revolves loosely on a stud fixed to the frame S.

T is a pulley on a shaft which revolves in boxes attached to the other end of the frame S. The band K is carried around the pulleys R and T, and from T around the pulley F of the cylinder-shaft; from thence around one of the pulleys J J′ and over the shifting pulley N.

As the carriage is moved outward the shifting-pulley N strikes one of the inclined planes and is moved laterally, thereby carrying the belt or band from one of the pulleys J J′ to the other, which reduces the speed of the spindles, and consequently lessens the twist imparted to the sliver or roping during the delivery and previous to the action of what is known as the "draft." The pulley then comes in contact with the other incline, which shifts the belt back to the other pulley and causes a faster motion during the action of the draft. The band is in constant motion while being shifted from one pulley to the other for changing the speed.

It will be seen that by regulating the position of the inclined planes by means of the slots in the stands O O more or less twist can be given to the sliver or roping during the "delivery." By reducing the speed during the delivery of the sliver, as described, a much more even thread is produced than by the ordinary method.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The gears D H and D′ I, the pulleys F J J′ N, inclines L M, pulley R T, and band K, combined with the shaft C, for the purpose of lessening the revolutions of the spindles during the delivery of the roping, as set forth.

PETER WILLIAM GREENWOOD.

Witnesses:

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